

**REMARKS**

Favorable reconsideration of this application is respectfully requested in view of the claim amendments and following remarks.

**Status of Claims**

Claims 1-16 and 23-27 are currently pending in the application of which claims 1, 9, and 23 are independent. Claims 1-16 and 23-27 were rejected.

By virtue of the amendments above, claims 1, 9, and 23 have been amended.

No new matter has been introduced by way of the amendments above. Entry thereof is therefore respectfully requested.

**Summary of the Office Action**

Claims 1-3, 5-16 and 23-27 are rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Xu.

Claims 1-3, 5, 9-14, and 23-25 are rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Tzamalouka.

Claim 4 is rejected under 35 U.S.C. §103(a) as being unpatentable over Tzamalouka in view of the Paper entitled “Building Low-maintenance Expressways for P2P Systems” by Zhang

Claims 23-25 are rejected under 35 U.S.C. §112 first paragraph as allegedly being drawn to a single means claim.

The aforementioned rejections are respectfully traversed for at least the reasons set forth below.

**Examiner Interview Conducted**

An Examiner interview was conducted between the Applicants' representative, Ashok Mannava, and Examiner Blair on June 14, 2010. The amendments provided herein were proposed. Examiner Blair indicated that the amendments overcome the prior art of record. Examiner Blair also indicated that the prior art of record could not be used in a future 103 rejection based on the amendments.

**Claim Rejection Under 35 U.S.C. §112**

Claims 23-25 were rejected under 35 U.S.C. §112, first paragraph, as allegedly being drawn to a single means claim.

Applicants respectfully submit that the Office Action's allegation is improper. MPEP § 2164.08(a) states:

A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to *Hyatt* is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

The Examiner states that the applicant is not entitled to a claim for a processor since the applicant has not disclosed anything novel about the processor. However, the Examiner misinterprets MPEP § 2164.08 and *In re Hyatt*. *In re Hyatt* pertained to a claim that contained only one limitation and that limitation was in the form of a means plus function. However, independent claim 23 contains three separate limitations, each tied to a separate

means plus function. Thus, claim 23 is not analogous to the claim in *In re Hyatt*. Further, the plain language of MPEP § 2164.08 defines a single means claim as a claim “where a means recitation does not appear in combination with another recited element of means.” Claim 23 contains means recitations, but they are clearly in combination with other recited elements of means (the further limitations). Furthermore, the means may include the processor in conjunction with the instructions executed by the processor, so the means does not refer to a single item. Thus, the rejection under § 112, first paragraph, is improper.

### **Claim Rejections Under 35 U.S.C. §102**

The test for determining if a reference anticipates a claim, for purposes of a rejection under 35 U.S.C. § 102, is whether the reference discloses all the elements of the claimed combination, or the mechanical equivalents thereof functioning in substantially the same way to produce substantially the same results. As noted by the Court of Appeals for the Federal Circuit in *Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984), in evaluating the sufficiency of an anticipation rejection under 35 U.S.C. § 102, the Court stated:

Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.

Therefore, if the cited reference does not disclose each and every element of the claimed invention, then the cited reference fails to anticipate the claimed invention and, thus, the claimed invention is distinguishable over the cited reference.

**A. The rejection of claims 1-3, 5-16 and 23-27 under 35 U.S.C. 102 (e) as allegedly being anticipated by Xu should be reversed for failing to teach all the claimed features.**

As amended, Independent claim 1 recites, *inter alia*:

transmitting a map lookup request to a region of a plurality of regions in the overlay network, wherein each region has a different map, and wherein each map includes proximity information associated with locations of nodes in the region;

receiving the map for the region for which the lookup request was sent;

determining first proximity information associated with a location of a first node in the physical network;

searching through [[a]] the map received from the lookup request associated with a region of the overlay network using the first proximity information, wherein the map includes proximity information associated with locations of nodes physically close in the physical network;

In his Response to Arguments, the Examiner states that Xu teaches searching through a map associated with a region in paragraph 3 of the Summary of Xu. This paragraph discloses partitioning an overlay into a grid, and storing information of each expressway node in the overlay grid corresponding to the landmark number. The paragraph does not disclose a separate map for every grid, the map containing proximity information for nodes in the grid (hereinafter referred to as region).

On page 4 of the Office action, the Examiner states that in col. 4, lines 20-29 of the reference, the expressway network provides the claimed “map”. This section discloses an expressway network of nodes, where the expressway nodes may be linked to other expressway nodes to form an expressway. This expressway is used to route information in the

network, and it connects **only expressway nodes**. This expressway network is not equivalent to the map of claim 1 which is **separate for every region, and contains proximity information for the nodes in the region**, not just the expressway nodes. Whereas there is only one expressway network of nodes, there are multiple maps each corresponding to a section of the overlay region. Further evidence of a lack of such a map is evidenced on column 7, lines 54-60 where in order to find a closest destination node, an ordinary node computes its landmark number, uses this landmark number as a key to route to a destination location with similar landmark numbers, and then performs a controlled flood to find an expressway node. This controlled flood is completely unnecessary in our embodiment because the destination source would return a map of the region containing proximity information for every node in the region. The source node would then index through this map, comparing proximity information for each node in the map to proximity information for the source node to identify the physically closest node to the source node. The sending node could then index this expressway node in a routing table to create an expressway route. (See Fig. 5A and specification pages 15 and 16 for how to create these expressway routes).

Claims 2,3, 5-8, 26, 27 depend on Independent claim 1 and thus these claims are believed to be allowable. Independent claim 9, as amended, recites features similar to claim 1. Claims 10-16 depend on claim 9 and thus these claims are believed to be allowable. Independent claim 23, as amended, contains features similar to that of independent claim 1, Claims 25 and 25 depend on claim 23, thus these claims are believed to be allowable for the same reasons independent claim 1 is believed to be allowable.

Independent claims 9 and 23 recite features similar to claim 1 and are believed to be allowable at least for the same reasons stated above. Accordingly, reversal of the rejection is respectfully requested.

**B. Claims 1-3, 5, 9-14 and 23-25 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Tzamalouka.**

The Examiner alleges that the map of claim 1 is taught by Tzamalouka column 5, lines 3-35, stating that “the central geographic database is the map” (Office Action page 10). This section of Tzamalouka discloses that virtual private tunneling networks are created and used for communicating between a central server and fixed and mobile egress points, and that a virtual overlay network can be formed using a plurality of tunnels. Further, Tzamalouka discloses that the central server comprises a central geographic database and receives content from the egress points and participating vehicles (mobile egress points), and the central database may be updated at various times based on this information. However, the central geographic database is not equivalent to the map of claim 1 as **Tzamalouka does not disclose that the central geographic database includes proximity information associated with locations of nodes physically close in the physical network.** Further, Tzamalouka fails to disclose that a central geographic database associated with a region of the overlay network is searched. While there is only one **central** geographic database in Tzamalouka, the claim discloses **multiple** maps. Thus, Tzamalouka fails to teach or suggest searching through a map associated with a region of the overlay network using the first proximity information, wherein the map includes proximity information associated with locations of nodes physically close in the physical network.

Independent claims 9 and 23 recite features similar to claim 1 and are believed to be allowable at least for the same reasons stated above.

Accordingly, reversal of the rejection is respectfully requested.

**Claim Rejections Under 35 U.S.C. §103(a)**

The test for determining if a claim is rendered obvious by one or more references for purposes of a rejection under 35 U.S.C. § 103 is set forth in *KSR International Co. v. Teleflex Inc.*, 550 U.S.398, 82 USPQ2d 1385 (2007):

“Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.” Quoting *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966).

As set forth in MPEP 2143.03, to ascertain the differences between the prior art and the claims at issue, “[a]ll claim limitations must be considered” because “all words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385. According to the Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in view of *KSR International Co. v. Teleflex Inc.*, Federal Register, Vol. 72, No. 195, 57526, 57529 (October 10, 2007), once the *Graham* factual inquiries are resolved, there must be a determination of whether the claimed invention would have been obvious to one of ordinary skill in the art based on any one of the following proper rationales:

- (A) Combining prior art elements according to known methods to yield predictable results;
- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known technique to improve similar devices (methods, or products) in the same way;
- (D) Applying a known technique to a known device

(method, or product) ready for improvement to yield predictable results; (E) “Obvious to try”—choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art; (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. *KSR International Co. v. Teleflex Inc.*, 550 U.S.398, 82 USPQ2d 1385 (2007).

Furthermore, as set forth in *KSR International Co. v. Teleflex Inc.*, quoting from *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006), “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasonings with some rational underpinning to support the legal conclusion of obviousness.”

Therefore, if the above-identified criteria and rationales are not met, then the cited reference(s) fails to render obvious the claimed invention and, thus, the claimed invention is distinguishable over the cited reference(s).

- **Claim 4**

Claim 4 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Tzamalouka in view of Zhang.

Zhang is not relied upon to teach the feature of claim 1 discussed above, nor does it. Since Zhang fails to remedy the deficiencies of Tzamalouka, claim 4 is believed to be allowable for at least the reasons stated above regarding claim 1.

Accordingly, reversal of the rejection is respectfully requested.

**Conclusion**

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited. Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below. Please grant any required extensions of time and charge any fees due in connection with this request to Deposit Account No. 08-2025.

Respectfully submitted,

Dated: June 14, 2010

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